

V. REMARKS

Applicants respectfully point out that the Examiner has not yet examined claim 2. Applicants hereby respectfully request examination of claim 2 with the results of same being submitted in a subsequent non-final Office Action.

Claims 1-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention. The claims are amended to obviate the rejection. Withdrawal of the rejection is respectfully requested.

Claims 1 and 3-5 are rejected under 35 U.S.C. 102(b) as anticipated by Hsieh (US Patent No: 5,249,123). The rejection is respectfully traversed.

A comparison between Hsieh, which is the main reference and the present invention shows that an essential difference exists in the process of removing after image components affecting output images, from detection signals provided by the radiation detecting means. Specifically, the difference is as follows.

Hsieh derives equation (5) for removing after-image components based on the same phenomenon as a phenomenon occurring in time of charging a capacitor. That is, in the case of Hsieh, as shown in Reference Figure 1 attached hereto, a phenomenon occurs in which signal outputs Y_k cannot follow variations X_k of X rays incident on the radiation detector are rectangular. The lag-behind parts (hatched portions shown in Reference Figure 1) are corrected by using equation (5), thereby to remove after-image components.

On the other hand, the present invention removes after-image components with an algorithm completely different from equation (5) of Hsieh.

That is, as shown in Reference Figure 2, the invention removes (subtracts), by using a recursive computation, a component (hatched portion) of a signal output Y_k at each preceding point of time added to the signal output having the same rectangular shape as variations X_k of incident X rays.

Therefore, as shown in the two Reference Figures, there is a difference in the models of after-image components to be removed. The processes for the after-image components corresponding to these models result in the complete

difference between equation (5) of Hsieh and the algorithm using a recursive computation of the present invention. As a result, since the after-image components to be removed are different, Hsieh cannot remove the after-image components of the present invention.

In summary, the present invention is different in construction from each reference. It is respectfully submitted that present invention is novel over Hsieh and that Hsieh fails to teach each and every element of claim 1 as amended. As a result, it is respectfully submitted that claim 1 is allowable over the applied art.

Withdrawal of the rejection is respectfully requested.

Claim 6 is rejected under 35 U.S.C. 103(a) as unpatentable over Hsieh as applied to claim 1 and further in view of Roos et al. (U.S. Patent No: 6,041,097). The rejection is respectfully traversed.

Roos discloses a diagnostic imaging apparatus. The Examiner cites this reference to show a flat panel detector with improved spatial resolution.

As discussed above, claim 1 is allowable over Hsieh. Roos fails to cure the deficiencies Hsieh. Therefore, claim 1 is allowable over the combination of these references.

Claim 6 depends from claim 1 and includes all of the features of claim 1. Thus, it is respectfully submitted that claim 6 is allowable at least for the reason claim 1 is allowable as well as for the features it recites.

Withdrawal of the rejection is respectfully requested.

The Examiner sets forth five (5) separate and distinct grounds for rejecting the present claims under the judicially created doctrine of obviousness-type double patenting as mentioned below. Applicants respectfully request postponement of addressing each one of these double patenting rejections until allowance or indication of allowability of the claims of the present application is made. Applicants believe postponement after allowance would simplify the issues and perhaps might automatically resolve some or all of the rejections.

A. Claims 1, 2 and 6 are provisionally rejected under the judicially created doctrine of obviousness-type double patent as unpatentable over claims

1, 14 and 15 of copending application number 10/853,357 (our file no. SUT-0236).

B. Claims 1, 2 and 6 are provisionally rejected under the judicially created doctrine of obviousness-type double patent as unpatentable over claims 1, 2, 4, 10 and 11 of copending application number 10/885,634 (our file no. SUT-0240).

C. Claims 1, 2 and 6 are provisionally rejected under the judicially created doctrine of obviousness-type double patent as unpatentable over claims 1, 2 and 5 of copending application number 10/887,920 (our file no. SUT-0242).

D. Claims 1, 2 and 6 are provisionally rejected under the judicially created doctrine of obviousness-type double patent as unpatentable over claims 1, 5 and 6 of copending application number 10/887,920.

E. Claims 1, 2 and 6 are provisionally rejected under the judicially created doctrine of obviousness-type double patent as unpatentable over claims 1, 3 and 8 of copending application number 10/958,297 (our file no. SUT-0253).

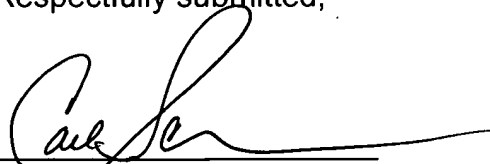
In view of the foregoing, reconsideration of the application and allowance of the pending claims are respectfully requested. Should the Examiner believe anything further is desirable in order to place the application in even better condition for allowance, the Examiner is invited to contact Applicants' representative at the telephone number listed below.

Should additional fees be necessary in connection with the filing of this paper or if a Petition for Extension of Time is required for timely acceptance of the same, the Commissioner is hereby authorized to charge Deposit Account No. 18-0013 for any such fees and Applicant(s) hereby petition for such extension of time.

Respectfully submitted,

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Enclosure(s): Amendment Transmittal
 two (2) Reference Figures
 Petition for Extension of Time (1 month)

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